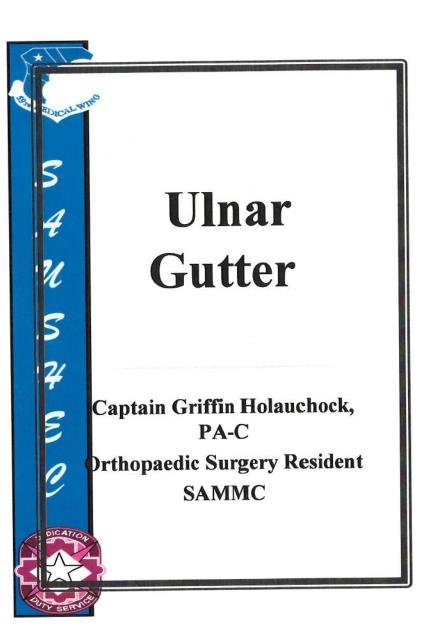
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Overview

- > Indications
- > Cast Vs Splint
- > Materials Needed
- **➢** General Principles
- > Splint
- > Cast
- > Self Evaluation
- > Points to Discuss with Patient



Indications

- > Soft-tissue hand injuries to the fourth and fifth fingers
- > Fourth and fifth metacarpal fractures
- > Fractures of the fourth and fifth phalanges
- > Positioning for rheumatoid arthritis or osteoarthritis

courtesy of A.Prof Frank Gaillard, Radiopaedia.org, rID: 7544



Cast Vs Splint

Casting

- > Definitive Management
- Does not allow for continued swelling
- Better control of ROM

Splinting

- Acute Management
- · Allows for continued swelling
- ROM limited by application and compliance



Materials Needed

- Stockinette
- > Trauma Shears
- > ACE Wrap
- Padding (Webril)
- ➤ Water Receptacle
- > Splinting Material
 - > Plaster of Paris, Pre-fabricated plaster or fiberglass (Orthoglass)
- Casting Material
 - > Fiberglass









- Measure out dry material at extremity being treated
 - > Plaster shrinks slightly when wet; If too long can fold ends back
 - > Can be measured on contralateral extremity
- Apply 2-3 layers of webril, avoid wrinkles, place extra padding on bony prominences and between digits if needed
- Use approximately 10-12 layers of splinting material (dependent on size of individual)
- > Mold with palms of hand vs fingers
- > After complete check for function, arterial pulse, capillary refill, temperature of skin, and sensation
- > Plain films or flouroscopy to evaluate injury and splint/cast



Splinting Order

- > Apply stockinette and/or webril first
- > Apply wet/prepared splinting material
- > Cover with webril
- > Secure with elastic (ACE) band
- > Mold splinting material as needed









Splinting Order (cont)

- > Apply stockinette and/or webril first
- > Apply wet/prepared splinting material
- > Cover with webril
- > Secure with elastic (ACE) band
- > Mold splinting material as needed



Casting Order

- >Apply stockinette first, then webril
- >Apply wet/prepared initial casting materi
- > Fold over excessive stockinette
- > Apply second layer of wet/prepared casting
- ➤ Mold casting material as needed



- > Step-by-Step Video Guide:
 - http://emedicine.medscape.com/article/80165-technique



Self Evaluation

- ➤ Is injured extremity in desired position?
 - > Empty can position
 - ➤ Wrist extension 20°
 - > MCP flexion 70°
- Does injured extremity maintain good color, temp, and cap refill
- Were thermal injuries avoided by ensuring water was not hot and cast was not too thick

Patient Education

- Elevate injured extremity at home
 - > Prop on pillow if needed
- Continue moving other fingers, elbow, and shoulder periodically throughout the day
- If cast feels tight despite elevation seek medical assistance
- Do not scratch under cast; do not get cast wet
- Get immediate assistance if:
 - > Numbness (pins and needles) of fingers
 - > Excessive swelling of fingers
 - > Blueness or whiteness of fingers
 - > Severe pain



Conclusion

- > Indications
- > Cast Vs Splint
- > Materials Needed
- > Key Points Before any Casting/Splinting
- > Splint
- > Cast
- > Self Evaluation
- > Points to Discuss with Patient

References

Boyd, A. S., Benjamin, H. J., & Asplund, G. (2009).

Principles of casting and splinting. *American Family Physician*, 79(1).

Retrieved from http://www.aultmanclerkship.com/uploads/7/7/6/2/7762745/casting_and_splinting.pdf

http://emedicine.medscape.com/article/80165-periprocedure

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